IN THE CLAIMS:

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of All Pending Claims

1. (currently amended) A tunable isolator circuit comprising:

an isolator comprising an input port, an output port and an isolation port;

an isolation matching circuit ~~a ferro-electric tunable component~~ coupled to the isolation port of the isolator; and

~~a~~ an input matching circuit having a first signal port coupled to the input port of the isolator and a second signal port coupled to an electrical component, the input matching circuit ~~and~~ comprising:

a signal path from the first signal port to the second signal port; and

~~the~~ a first ferro-electric tunable component coupled between the first signal port and the second signal port along the signal path, [[;]] wherein the first ferro-electric tunable component [[,]] is responsive to a control signal [[,]] ~~adjusts the~~ for adjusting an impedance of the input matching circuit ~~, and wherein the matching circuit and isolator are integrated on one substrate~~.

2. (currently amended) The tunable isolator circuit of claim 1, wherein the first ferro-electric tunable component comprises a ferro-electric tunable capacitor.

3. (canceled)

4. (currently amended) The tunable isolator circuit of claim 1, wherein the input matching circuit ~~comprises: an output matching circuit comprising a matching circuit~~

~~chosen~~ matches impedances between the isolator and the electronic component, wherein the electronic component is a power amplifier. ~~from a group consisting of an isolator-to-diplexer matching circuit and an isolator-to-multiplexer matching circuit, wherein the output matching circuit is coupled to the output port of the isolator and to an input port of a device chosen from a group consisting of a diplexer and a multiplexer~~.

5. (currently amended) The tunable isolator circuit of claim 1 [[4]], wherein the input matching circuit further comprises a second ferro-electric tunable component coupled between the signal path and an electrical ground.

6. (currently amended) The tunable isolator circuit of ~~cliam~~ claim 5, wherein the second ferro-electric tunable component comprises a tunable ferro-electric capacitor.

7. (currently amended) The tunable isolator circuit of claim 1 [[4]], further comprising: ~~further comprising an input matching circuit comprising a power amplifier-to-isolator matching circuit, wherein the input matching circuit is coupled to the output port of a power amplifier and to the input port of the isolator~~.

an output matching circuit having a third signal port coupled to the output port of the isolator and a fourth signal port coupled to a second electrical component, the output matching circuit comprising:

the signal path from the third signal port to the fourth signal port; and

a third ferro-electric tunable component coupled between the third signal port and the fourth signal port along the signal path, wherein the third circuit ferro-electric tunable component is responsive to a second control signal for adjusting the impedance of the output matching circuit.

8. (currently amended) The tunable isolator circuit of claim 1, wherein the input

matching circuit ~~comprises: an input matching circuit comprising~~ is a power amplifier-to-isolator matching circuit~~, wherein the input matching circuit is~~ coupled to the output port of a power amplifier and to the input port of the isolator.

9. (currently amended) The tunable isolator circuit of claim 7 ~~8~~, wherein the output matching circuit further comprises a ~~second~~ fourth ferro-electric tunable component coupled between the signal path and an electrical ground.

10. (currently amended) The tunable isolator circuit of ~~cliam~~ claim 9, wherein the ~~second~~ fourth ferro-electric tunable component comprises a tunable ferro-electric capacitor.

11. (currently amended) The tunable isolator circuit of claim 1, ~~further comprising an~~ wherein the isolation ~~port~~ matching circuit is coupled between an electrical ground and the isolation port, and wherein the isolation ~~port~~ matching circuit comprises ~~a second~~ an isolation circuit ferro-electric tunable component.

12. (currently amended) The tunable isolator circuit of claim 11, wherein the ~~second~~ isolation circuit ferro-electric tunable component comprises a ferro-electric tunable capacitor.

13. (currently amended) The tunable isolator circuit of claim 7 [[4]], wherein the output matching circuit matches a natural output impedance of the isolator to a natural input impedance of the ~~device~~ second electrical component ~~coupled to the output port of the isolator, thereby reducing non-linear distortion of the ferro-electric component and permitting operation at higher power levels~~.

14. (currently amended) The tunable isolator circuit of claim 13, wherein the ~~device~~

second electrical component ~~coupled to the output port of the isolator~~ is a duplexer, and wherein the output matching circuit matches from about 12.5 ohms at the isolator output port to about 12.5 ohms at ~~the~~ a duplexer input port.

15. (currently amended) The tunable isolator circuit of claim 8, wherein the input matching circuit matches a natural output impedance of the power amplifier to a natural input impedance of the isolator~~, thereby reducing non-linear distortion of the ferro-electric component and permitting operation at higher power levels~~.

16. (currently amended) The tunable isolator circuit of claim 15, wherein the input matching circuit matches from about 2 ohms at ~~the~~ a power amplifier output port to about 12.5 ohms at the isolator input port.

17. (currently amended) The tunable isolator circuit of claim 7, wherein the output matching circuit matches a natural output impedance of the isolator to a natural input impedance of the second electrical component ~~device~~ coupled to the output port of the isolator, and wherein the input matching circuit matches a natural output impedance of the power amplifier to a natural input impedance of the isolator~~, thereby reducing non-linear distortion of the ferro-electric component and permitting operation at higher power levels~~.

18. (canceled)

19. (canceled)

20. (new) A tunable isolator circuit comprising:

an isolator comprising an input port, an output port and an isolation port;

an isolation matching circuit coupled to the isolation port of the isolator and

comprising at least one ferro-electric tunable component;

an input matching circuit having a first signal port coupled to the input port of the isolator and a second signal port coupled to an electrical component, the input matching circuit comprising:

a signal path from the first signal port to the second signal port; and

a first ferro-electric tunable component coupled between the first signal port and the second signal port along the signal path, wherein the first ferro-electric tunable component is responsive to a control signal for adjusting the impedance of the input matching circuit; and

an output matching circuit having a third signal port coupled to the output port of the isolator and a fourth signal port coupled to a second electrical component, the output matching circuit comprising:

the signal path from the third signal port to the forth signal port; and

a second ferro-electric tunable component coupled between the third signal port and the fourth signal port along the signal path, wherein the second circuit ferro-electric tunable component is responsive to a second control signal for adjusting the impedance of the output matching circuit.